Navy seeking smarter energy usage ashore

ExFOBs Will Continue Despite Budget Cuts, Withdrawal From Afghanistan

The Marine Corps will continue hosting Experimental Forward Operating Bases to identify technologies that reduce dependency on energy and water in the battlefield even as the service draws down its presence in Afghanistan and budgets remain uncertain, the deputy assistant secretary of the Navy for energy said last week.

During a presentation at the 2013 Deloitte Energy Conference on May 21, Tom Hicks lauded the ExFOB process as a means of identifying and rapidly fielding potentially breakthrough technologies, some of which have proven as much as 90 percent more efficient than the items and processes they replace.

"Today, all the battalions in Afghanistan have access to these, actually use these technologies," Hicks said, adding that they bring tactical advantages -- not just environmental ones -- such as reducing the need to carry around cumbersome batteries or bottled water. "That's more storage in their backpacks they can use for medicine, for ammunition, food, whatever it might be."

Asked if the ExFOBs would continue even as budgets shrink and Marines leave Afghanistan, Hicks told *Inside the Navy*, "The answer is yes."

"Many of those technologies that we've brought into theater through ExFOB . . . have actually become programs of record because they just make sense, because they save energy, they bring the Marines back to their roots of being expeditionary," he said.

The Marine Corps has identified and prioritized about 150 technology gaps the service needs to address to get reach its goal of being resource-efficient, Hicks continued. Each of those technology gaps has been outlined in a Joint Capabilities Document and is ready to be addressed by future ExFOBs and other efforts, he said.

"So the answer is, absolutely, that concept will continue because it's delivering results," Hicks said. "Will it continue to the same level, where we're doing two ExFOB demonstrations per year? Maybe not. But I think that those have been very productive in identifying those technologies that we can use today, use tomorrow and into the future."

In fact, the ExFOBs are getting larger, even if they'll only happen once a year instead of twice a year, the ExFOB lead in the Marine Corps' Expeditionary Energy Office told *ITN*.

"We've always had industry come out -- that's what this event was conceived for, was to have an information exchange between industry and the Marine Corps so we can see what's within the realm of the possible and what systems they have that might be able to fill those gaps," Katherine Hantson said May 23. But during the most recent ExFOB, earlier this month at Marine Corps Air Ground Combat Center Twentynine Palms, CA, "we had almost as many government systems out at this past ExFOB as industry systems."

"I think it's a testament to the success of the event," Hantson continued. "Subject matter experts in energy from across the Department of Defense recognize that ExFOB is the place where all the best SMEs gather every year and share information and share what they're doing."

This year's ExFOB focused on hybrid power systems that combine traditional diesel generators with solar panels, energy storage and smart controls. Hantson said the exFOB addressed five of the technology

gaps outlined in the Marine Corps' Expeditionary Energy, Water and Waste Initial Capabilities Document, and she said that future exFOBs would also tackle multiple technology gaps.

During his presentation, Hicks said the Navy is trying to institutionalize the idea of saving energy to cut costs, create warfighting advantages and avoid unexpected bills when the cost of foreign energy rises, for example. In addition to big events and demonstrations, he said the Navy has also created new master's program at the Naval Postgraduate School that focuses on energy technology, policy and more.

"We're also building energy into promotion boards for captains and admirals, as well as into being a commanding officer and executive officer in the Navy," Hicks added. "Just beginning to scratch that surface there, but I think, to me, this is the untapped goldmine . . . if we can tap into that culture" of encouraging all sailors to be energy-conscious, the results would be significant, he said.

Ashore, the Navy is looking at creating smart grids and microgrids inside installations and connecting installations in major fleet concentration areas to "not only drive demand-reduction savings . . . but also [to] provide greater energy security and resiliency."

Hicks noted a program to help lower energy usage in military housing -- usage per household is monitored, and those falling into a middle category of usage see no difference from before. But those who save enough energy would get reimbursed for the saved power, and those who use too much energy would be charged for it. Hicks said that during a pilot program, in which the energy was monitored but no money actually exchanged hands, the Navy saw a 10- to 12- percent reduction in overall energy usage. -- *Megan Eckstein*

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